

CLAIMS

What is claimed is:

- 5 1. A hand-held nail polish removing device comprising:
a vessel in which a liquid solvent for removing nail polish is stored, said vessel having an opening through which said solvent is added to said device;
an applicator element that is chemically resistant and permeable
10 to said solvent, and that can transmit but not retain the solvent; wherein said applicator element is secured over said opening in said vessel, wherein the largest exposed portion of said applicator element is configured and arranged so that said device can be operated with its major longitudinal axis essentially perpendicular
15 to the surface of a nail while said nail polish is being removed; and
a valve assembly comprising a liquid flow valve that can be opened or closed by increasing or decreasing the manual pressure on said applicator element, wherein said flow valve is configured and arranged beneath said applicator element.
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2. The device of claim 1 wherein said vessel is configured and sized to be hand-held, wherein said vessel has a generally elongated shape with a cross-sectional geometry selected from the group consisting of round, oval, polygon and contoured shapes.
- 25 3. The device of claim 1 wherein said vessel is sized to hold between 10 ml and 100 ml.
4. The device of claim 1 wherein said largest exposed portion of
30 said applicator element has an area of between 0.2 and 4.0 square centimeters.

5. The device of claim 4 wherein said largest exposed portion of said applicator element has an area of between 0.5 and 2.0 square centimeters.

5 6. The device of claim 1 wherein the geometric shape of said largest exposed portion of said applicator element is selected from the group consisting of flat, convex outward, concave outward and polyhedral shapes.

10 7. The device of claim 1 wherein said applicator element comprises a permeable material selected from the group consisting of open cell foams, fabric materials, non-woven fiber materials, aligned fiber materials, porous plastic materials and combinations thereof.

15 8. The device of claim 7 wherein said permeable material is fabricated from a resin selected from the group consisting of polyolefins, polyesters, polyurethanes, polycarbonates, nylons and combinations thereof.

20 9. The device of claim 1 wherein said largest exposed portion of said applicator element is compliant to the nail surface during use.

10. The device of claim 1 wherein said valve assembly comprises a push-valve that can be opened by manual pressure applied to said applicator element.

25 11. The device of claim 1, wherein the structure, configuration and arrangement of said applicator element and said flow valve obviate the need for a nib to transport said solvent from said vessel to said nail.

30 12. A method of applying a nail polish remover solvent to a lacquer-coated nail, using a hand held device which holds a quantity of

liquid solvent and having a valved end for release of solvent during downward manual pressure on the valved end, comprising the steps of:

providing an applicator element on the valved end of the hand held device that is chemically resistant and permeable to the solvent
5 and that can transmit but not retain the solvent;

contacting the surface of said lacquer-coated nail with said applicator element;

applying downward manual pressure on said lacquer-coated nail with said applicator element for a period of time sufficient to
10 release an adequate quantity of said solvent;

moving said applicator element over the surface of said lacquer-coated nail until said adequate quantity of said solvent has covered said lacquer-coated nail; and

optionally scrubbing said applicator element over the surface of
15 said lacquer-coated nail to loosen and remove the lacquer.

13. The method of claim 12 wherein said applying, moving and scrubbing steps are carried out simultaneously.

20 14. The method of claim 12 further comprising:

waiting until said adequate quantity of said solvent has softened the lacquer on the nail; and
rubbing said applicator element over the surface of said nail until said lacquer has been displaced from said nail.

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15. The method of claim 13 further comprising:

waiting until said adequate quantity of said solvent has softened the lacquer on the nail; and
scrubbing said applicator element over the surface of said nail until
30 said lacquer has been displaced from said nail.

16. The method of claim 12 further comprising:

removing the residue of dissolved lacquer from the applicator element.

17. The method of claim 16 wherein the step of removing the residue
5 includes:

removing with an absorbent material the residue of dissolved lacquer from the applicator element.